

Work Order ID 52328 -1

Tuesday, September 22, 2009 3:12:10 PM

Page 1

Item ID: D2573

Accept

Setup Start

Revision ID: E

Stop

Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00

Required Date: 10/9/2009 Req'd Qty: 8.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

Date: 09-24

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2573

Rev E

100

0.00



HAAS 1

HAAS CNC VERTICAL MACHINING #1

0.00

Memo

Program Batch No. 52328 Double check by: HA ☐ 1-Machine Step
No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine
Step No 2 per Folio FA051 and inspect per attached Dimension Sheets ☐ 3-
Machine Step No 3 per Folio FA051 and insp

110

0.00



Mill Conv

CONVENTIONAL MILLING MACHINE

0.00

Memo

Machine keyway as per dwg D2573 & D2574

120

0.00



QC

QC2- Inspect parts off machine FAI/FAIB

Memo

Quality Control

PT5
7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: N/A Fault Category: Machine NCR: Yes No DQA: 1A Date: 09.11.06
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: 7 Date: 09.11.11

NCR: <u>52328</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
5/10/13	100	Found by op te opposite shift that there are dims on PAR sheet that are not correct. - Also saddle to skid take	CP 05.10.13 per QSI 042	0.113" THICK WALL OK → MIN THICK 0.110" SCRAP, SEE BELOW BORE OF 1.530 OK BORE OF 2.021 OK	8/8 09/10/19	S 02/10/13	CP 05.10.13 per QSI 042	S 09/10/13
		Wore is too thin about 0.100 should be 0.125 R.C. operator error + he sig Problem. R.C. Lack of Attention R.C. PAR NOT TRUE.	CP 05.10.13 per QSI 042	SCRAP Qty (2) with WALL < 0.110". HIGH STRESS AREA replace Batch # B46412 x2	8/8 09/10/19	S 02/10/13	CP 05.10.13 per QSI 042	S 09/10/13
05.10.19	100	REMEASURING SADDLE WITH 0.113", ACTUAL MIN IS 0.110".	CP 05.10.19 per QSI 042	SCRAP SADDLE ✓			CP 05.10.29 per QSI 042	

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: _____ Fault Category: Machined parts NCR: Yes No DQA: / Date: 05.11.17
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: / Date: 05.11.17

NCR: <u>52328</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09/10/09	100	One saddle was affected by mark on the Island and on the bore: :R.C. Machine mal function Machine drop tool during chamfer operation. Change to	<u>/</u> Resure	Scrap Replace Batch # <u>46412</u>	<u>SP</u> 09/10/09	<u>S</u> 02/10/13	<u>/</u> Resure	<u>S</u> 02/10/13

NOTE: Date & initial all entries

Work Order ID 52328

Tuesday, September 22, 2009 3:12:10 PM



Page 2

Item ID: D2573

Accept



Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 10/9/2009 Req'd Qty: 8.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

PART SCRAPED

(see NCR)

09.10.29

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: _____ □OVEN TEMPERATURE: _____

□FINISH TIME: _____

Work Order ID 52328

Tuesday, September 22, 2009 3:12:10 PM



Page 3

Item ID: D2573

Accept



Setup Start



Revision ID: E

Stop



Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009 Start Qty: 8.00



Cust Item ID:

Required Date: 10/9/2009 Req'd Qty: 8.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							
170 Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo	0.00 0.00							
180 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

u 9.10.30

Picklist Print

Page 1

Tuesday, September 22, 2009 3:12:09 PM

Work Order ID: 52328



Parent Item: D2573RevE



Parent Item Name: Saddle, Aft Out 205

Start Date: 9/23/2009

Required Date: 10/9/2009

Start Qty: 8.00

Required Qty: 8.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6101-007RevB		Manufactured	No			100	Each	0.0000	8.0000			
Saddle Billet												

Batch #: B46412 8 mL 09/10/07

Batch #: B46412 1 AS 09/10/07 (scrup)

DART AEROSPACE LTD	Work Order: 32328
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4		
A	0.438	0.443		.440	.440	.440			
B	1.745	1.755		1.748	1.750	1.750			
C	3.495	3.505		3.500	3.500	3.500			
D	1.745	1.755		1.750	1.750	1.750			
E	7.990	8.010		8.000	8.000	8.000			
F	0.490	0.510		.504	.504	.500			
G	0.257	0.262		.259	.259	.259	.258		
H	0.375	0.380		.378	.377	.377	.377		
I	0.490	0.510		.493	.496	.500			
J	1.174	1.184		1.178	1.178	1.178	1.177		
K	0.558	0.578		.559	.556	.558			
L	1.174	1.184		1.178	1.178	1.177	1.177		
M	1.365	1.375		1.367	1.367	1.367	1.367		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.123	4.123	4.123	4.123		
P	0.115	0.135		.125	.124	.122	.124		
Q	0.115	0.135		.135	.135	.135			
R	0.240	0.260		.251	.252	.251	.252		
S	0.115	0.135		.128	.130	.121			
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.228	3.228	3.224	3.231		
V	0.230	0.250		.238	.240	.238			
W	0.115	0.135		.130	.134	.135			
X	0.308	0.313		.310	.310	.311			
Y	0.760	0.765		.760	.760	.760			
Z	0.352	0.372		.364	.364	.364			
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.632	.632	.630			
AC	0.053	0.073		.063	.063	.063			
AD	0.240	0.260		.250	.250	.250	.250		
AE	1.500	1.520		1.512	1.511	1.512			
AF	0.115	0.135		.125	.130	.135			
AG	0.240	0.280		.271	.271	.277	.275		
AH	0.240	0.260		.247	.250	.249			
AI	2.000	2.020		2.002	2.002	2.002			
AJ	0.023	0.043		.033	.033	.033			

Accept/Reject

Measured by: <i>RP</i>
Date: 09/00/08

Audited by:
Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.25	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD		Work Order: 32328
Description: Saddle, Aft Outboard		Part Number: D2573
Inspection Dwg: D2573 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				51	62	73	84		
A	0.438	0.443		.440	.439	.440	.440		
B	1.745	1.755		1.750	1.750	1.749	1.750		
C	3.495	3.505		3.500	3.500	3.499	3.500		
D	1.745	1.755		1.750	1.750	1.749	1.750		
E	7.990	8.010		8.000	8.001	8.001	8.001		
F	0.490	0.510		.505	.506	.506	.508		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		.502	.494	.496	.495		
J	1.174	1.184		1.177	1.177	1.177	1.177		
K	0.558	0.578		.568	.555	.558	.560		
L	1.174	1.184		1.177	1.177	1.177	1.177		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.126	.126	.127	.127		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.252	.252	.253	.253		
S	0.115	0.135		.117	.120	.125	.125		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.230	3.270	3.230	3.270		
V	0.230	0.250		.238	.234	.243	.244		
W	0.115	0.135		.115	.109	.125	.134		
X	0.308	0.313		.308	.310				
Y	0.760	0.765		.760	.760				
Z	0.352	0.372		.362	.372	.363	.368		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.630	.635	.635	.635		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.250	.250	.250	.250		
AE	1.500	1.520		1.517	1.530	1.500	1.508		
AF	0.115	0.135		.125	.125	.125	.118		
AG	0.240	0.280		.270	.270	.270	.270		
AH	0.240	0.260		.250	.243	.253	.253		
AI	2.000	2.020		2.009	2.020	2.000	2.000		
AJ	0.023	0.043		.033	.033	.033	.024		
Accept/Reject									

Measured by: <i>SP</i>	Audited by:
Date: 09/10/09	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order: 52328
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				97	210	311	4		
A	0.438	0.443		.440	.439	.439			
B	1.745	1.755		1.748	1.749	1.749			
C	3.495	3.505		3.499	3.499	3.499			
D	1.745	1.755		1.749	1.749	1.749			
E	7.990	8.010		8.004	8.003	8.003			
F	0.490	0.510		.502	.503	.505			
G	0.257	0.262		.258	.259	.259			
H	0.375	0.380		.377	.377	.377			
I	0.490	0.510		.502	.500	.500			
J	1.174	1.184		1.177	1.178	1.178			
K	0.558	0.578		.569	.569	.569			
L	1.174	1.184		1.177	1.178	1.178			
M	1.365	1.375		1.370	1.369	1.368			
N	2.495	2.505		2.500	2.500	2.499			
O	4.119	4.129		4.129	4.123	4.123			
P	0.115	0.135		.122	.125	.123			
Q	0.115	0.135		.135	.135	.135			
R	0.240	0.260		.252	.251	.251			
S	0.115	0.135		.128	.127	.124			
T	0.178	0.198		.188	.188	.188			
U	3.210	3.250		3.230	3.230	3.230			
V	0.230	0.250		.242	.240	.240			
W	0.115	0.135		.132	.129	.130			
X	0.308	0.313			.312	.312			
Y	0.760	0.765			.760	.760			
Z	0.352	0.372		.368	.368	.367			
AA	0.470	0.530		.500	.500	.500			
AB	0.615	0.635		.635	.635	.633			
AC	0.053	0.073		.063	.063	.063			
AD	0.240	0.260		.250	.248	.249			
AE	1.500	1.520		1.509	1.511	1.511			
AF	0.115	0.135		.122	.126	.126			
AG	0.240	0.280		.270	.273	.278			
AH	0.240	0.260		.251	.249	.251			
AI	2.000	2.020		2.000	2.002	2.000			
AJ	0.023	0.043			.033	.033			

Accept/Reject

Measured by: <i>RF</i>
Date: <i>09/10/29</i> / <i>09/10/16</i>

Audited by:
Date:

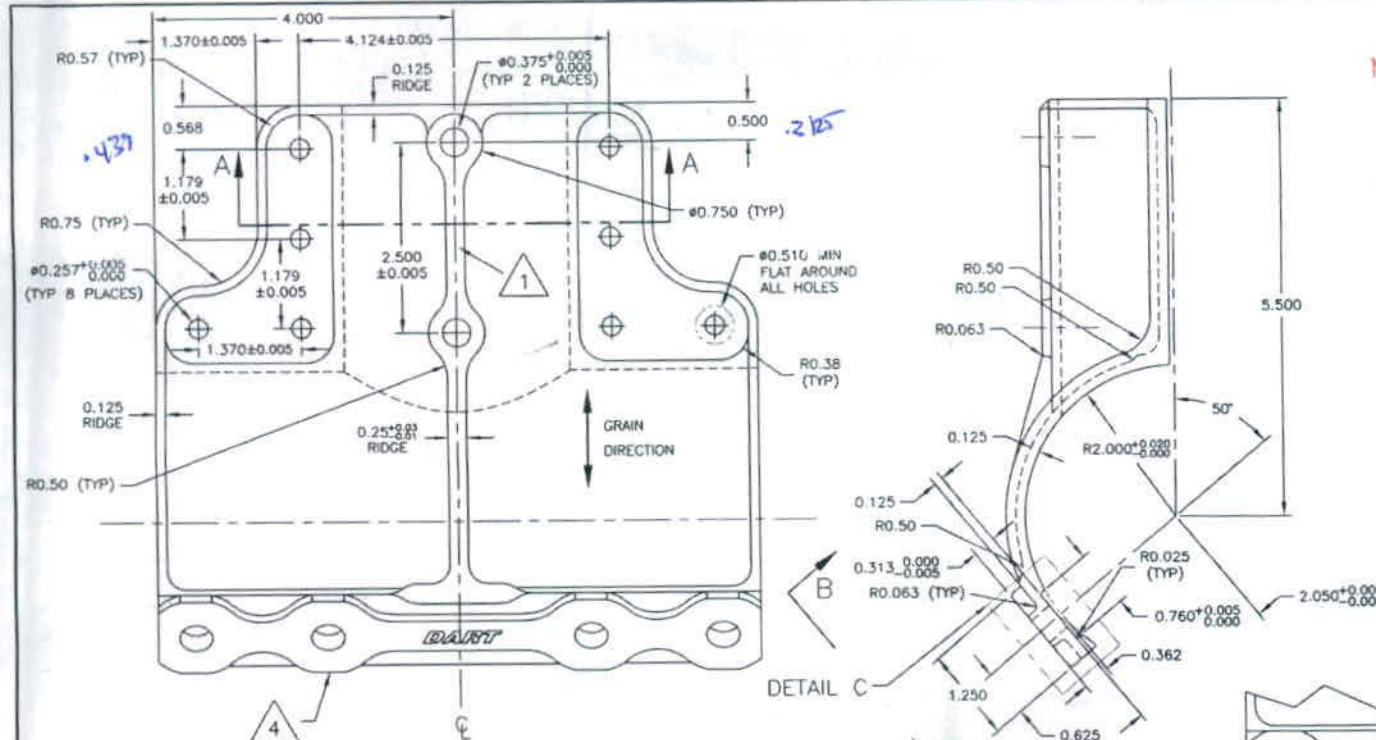
Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	<i>[Signature]</i>

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 52328

RELEASED

05.12.06

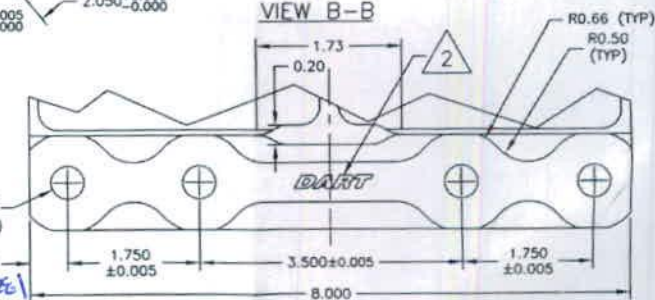


NOTES

MATERIAL: 7075-T7351 (Q0-A-250/12)
(REF DART SPEC. D6102-001)
FINISH: ACID ETCH, ALDINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

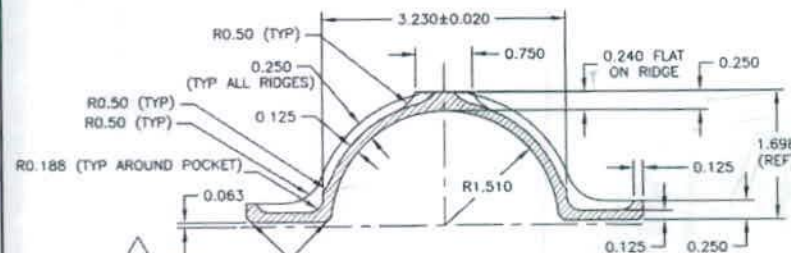
- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.125
- 3 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 4 CHAMFER 0.063" x 45° ALL AROUND
- 5 CHAMFER 0.033" x 45° (SEE DETAIL C)

VIEW B-B



E	05.07.13	ADD CHAMFER ON RIDGE NOTE 5
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE

DESIGN	DS	DRAWN BY	PH	DART	DART AEROSPACE LTD.
CHECKED	#	APPROVED	#	DRAWING NO.	D2573
DATE	05.07.13	TITLE	OUTER AFT SADDLE	REV. E	SHEET 1 OF 1
		SCALE	2:3		



SECTION A-A



DETAIL C
SCALE 4:3

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